PROFESSIONAL LEARNING COMMUNITIES A PARTICIPATORY APPROACH TO OER IN KARNATAKA

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Professional Learning Communities - a participatory approach to OER in Karnataka

Sub-Project 5, ROER4D

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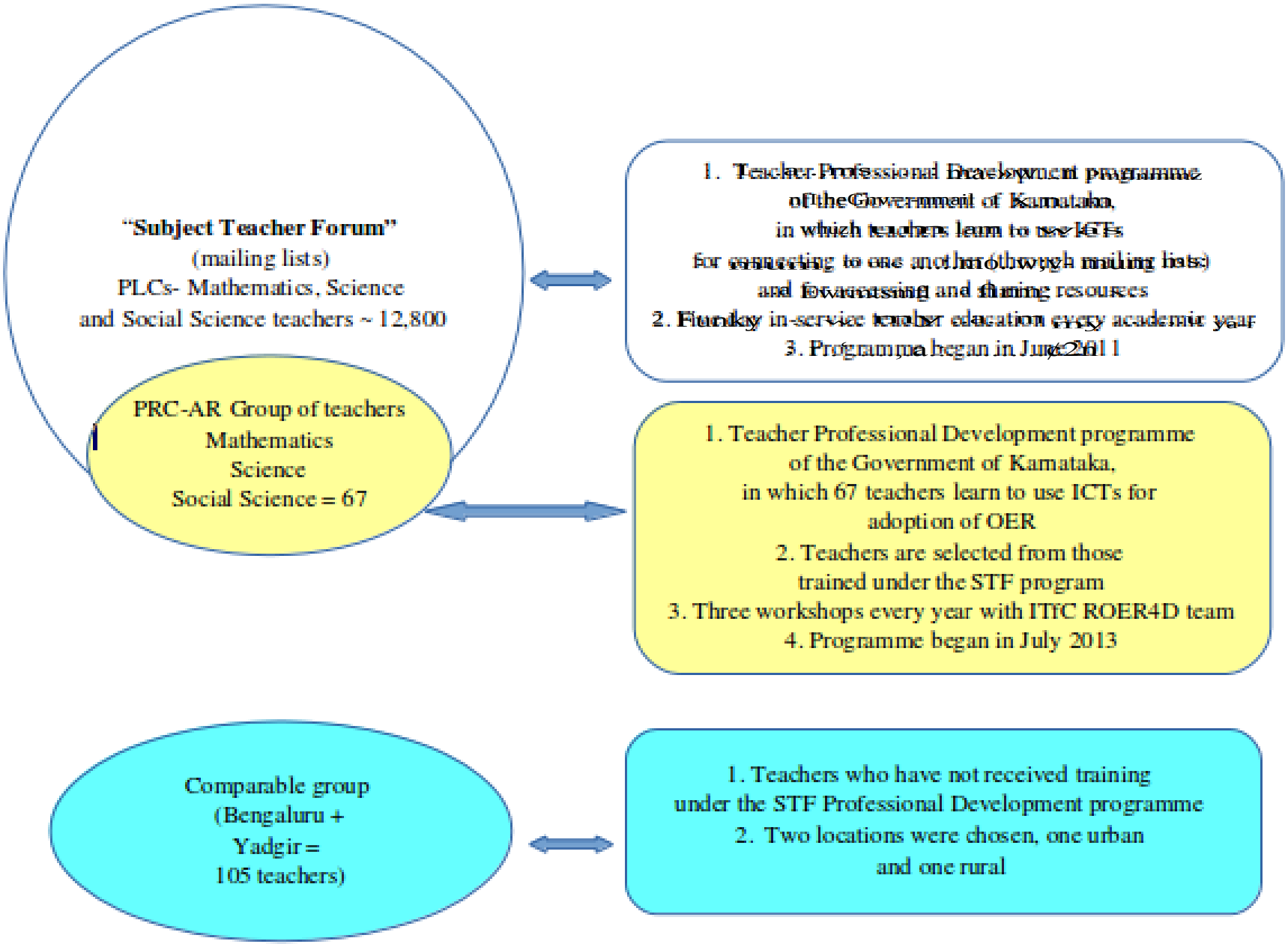
What did the research seek to study

Can a collaborative, "bottom-up" approach by teachers working together to create, adapt and share contextually appropriate resources provide a model of OER adoption?

Action research with a group or 67 Mathematics, Science and Social Science Government High School teachers in Karnataka, who are part of a larger professional learning of teachers created by the 'Subject Teacher Forum' program

Research period - January 2014 to December 2015
Location – Karnataka state, India

Actors in the study



Overall context of the research

1. Techno-social context

- ✔ ICT program penetration high in high schools but actual availability poor
- ✔ Teachers use of ICTs poor, outsourced model of implementation
- ✔ Proprietary software environment

2. Pedagogical context

- ✔ Text book culture - teacher as a minor technician
- ✔ Teacher isolation impacting teacher development

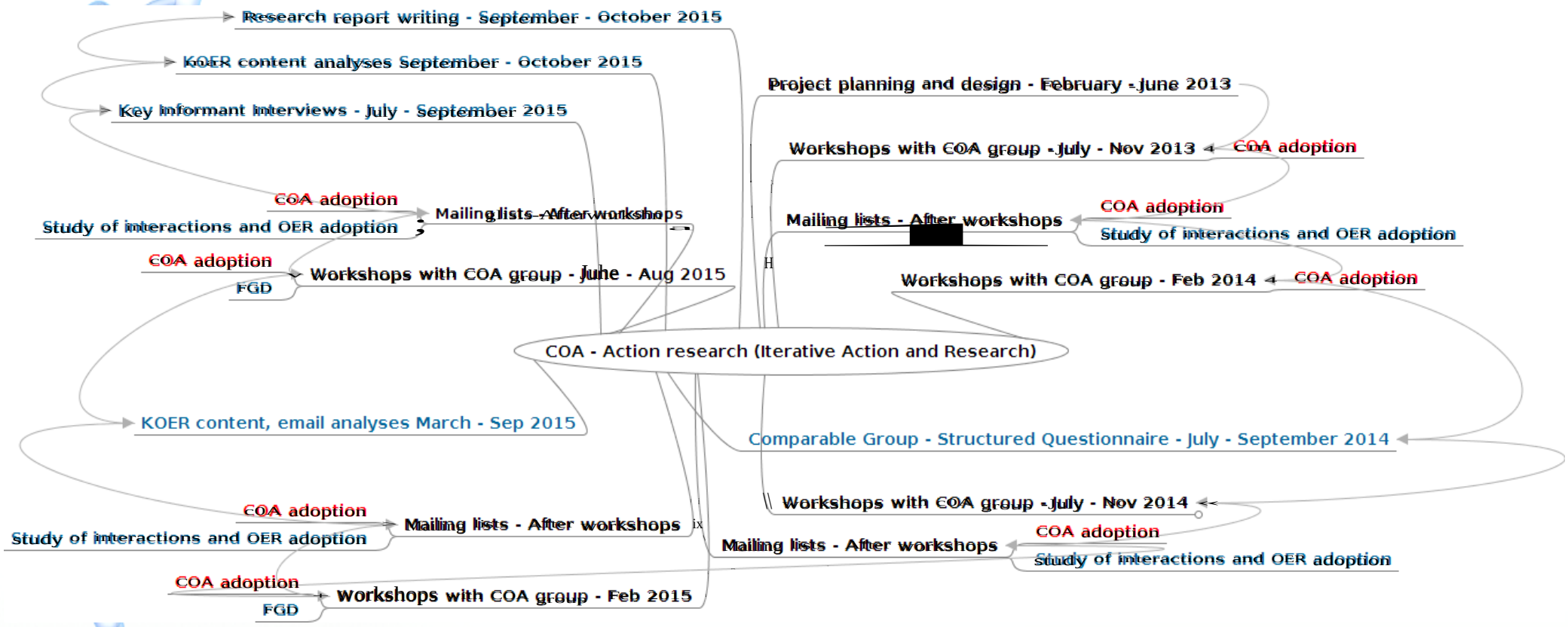
3. Socio-cultural context

- ✔ Linguistic diversity
- ✔ Text books created at state level may not be able to address local contexts

Methodology

Tools	Object of analysis	Focus of data collection activity
1. Structured questionnaire	67 COA teachers and Comparable group of 124 teachers	Information about ICT use, resource adoption practices, and teacher development processes
2. Focus group discussions	67 COA teachers across 10 focus group discussions	Sharing beliefs and perspectives on resources, and key concepts (OER, KOER, TPD, PLC etc.)
3. Mailing lists interactions	Mails sent and received by COA teachers on the PLC mailing lists (state-wide community of 12,800 teachers)	Reuse, creation, revision, remixing, and redistribution of resources by teachers in PLC mailing lists
4. KOER content analysis	Select content reuse, creation, revision, remixing, and redistribution by COA teachers	Creation, adaptation and sharing of resources by COA teachers on the KOER portal
5. Key informant interviews	5 Teachers, teacher educators, senior department officials	Factors enabling and constraining the development of an OER model based on COA

Action research cycle (Mindmap)



How did OER adoption impact techno-social factors

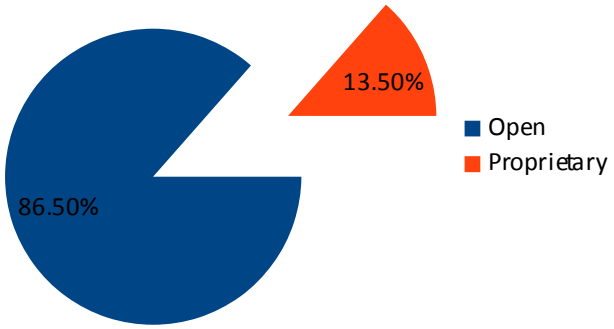
Capacity building of COA teachers in using digital technologies

- Demographic profile of the teachers in the COA and Comparable groups
- ICT usage habits

How did OER adoption impact techno-social factors

Free and open technology environment

- Change in teachers' conception of resources



The exposure to the free and open source software applications has introduced teachers to a variety of resource formats, enabling their movement from the common "power point presentations" to mind maps ……
…… They are also seeking and exploring multiple tools that can work on different devices and looking for convergent solutions - mobile upload of a solution to a solved problem (solved by hand), sharing recordings of broadcasts by teachers, looking for mathematical teaching….. learning software for the smart phone, exploring Unicode font converters for local language typing or upgrading Geogebra from its 2D version to a 3D one.

How did OER adoption impact techno-social factors

- Systemic integration of ICTs into TPD and OER adoption
  - Systemic availability of ICT infrastructure for teacher training
  - Perspectives on technology and teacher training
- Techno-social challenges

How did OER adoption impact techno-pedagogical factors

- COA processes influence on OER adoption
  - Design of the KOER website and OER creation; teachers review of this
  - OER processes seen on the KOER website
  - A professional learning community as a site for OER adoption

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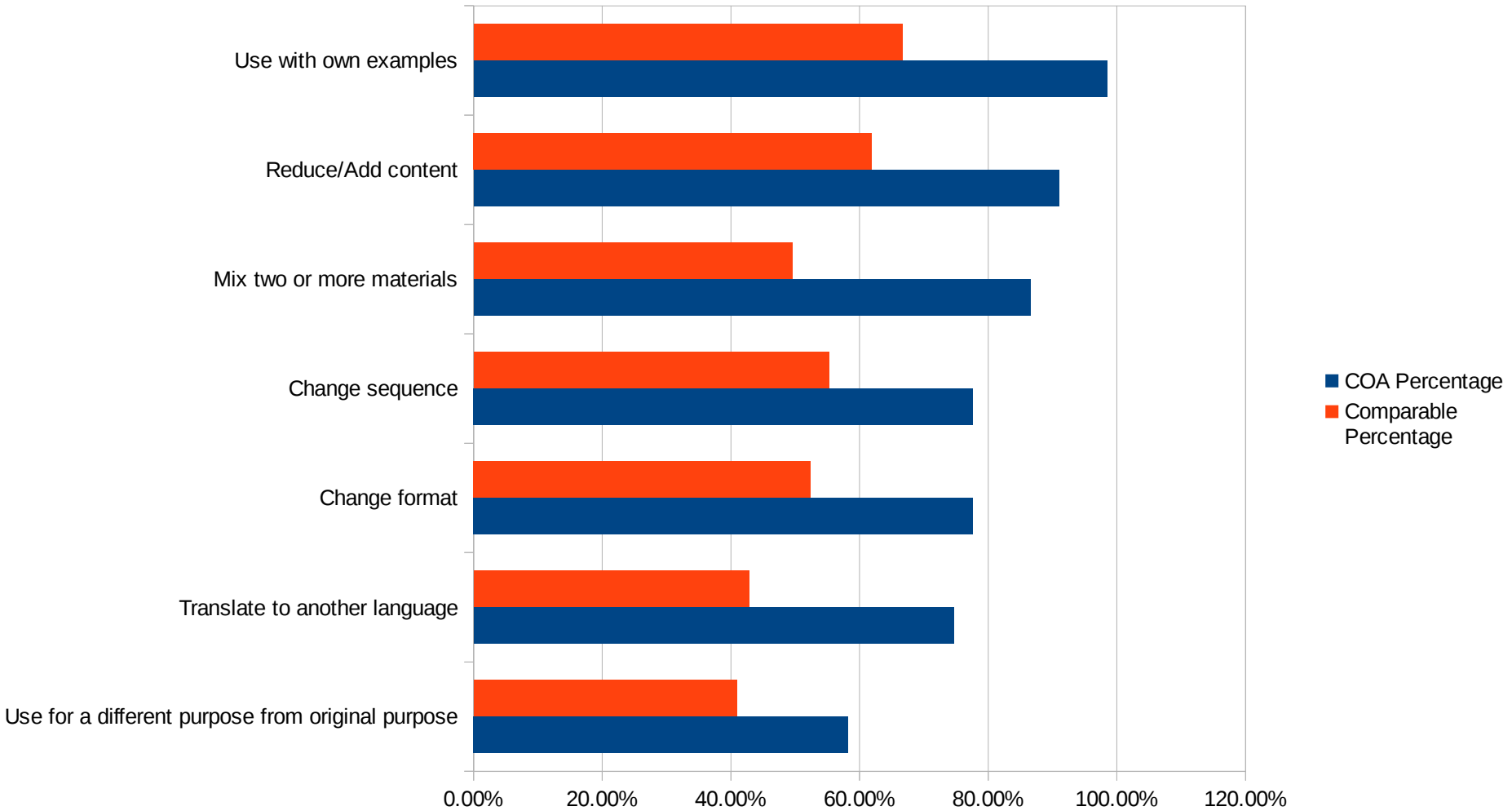
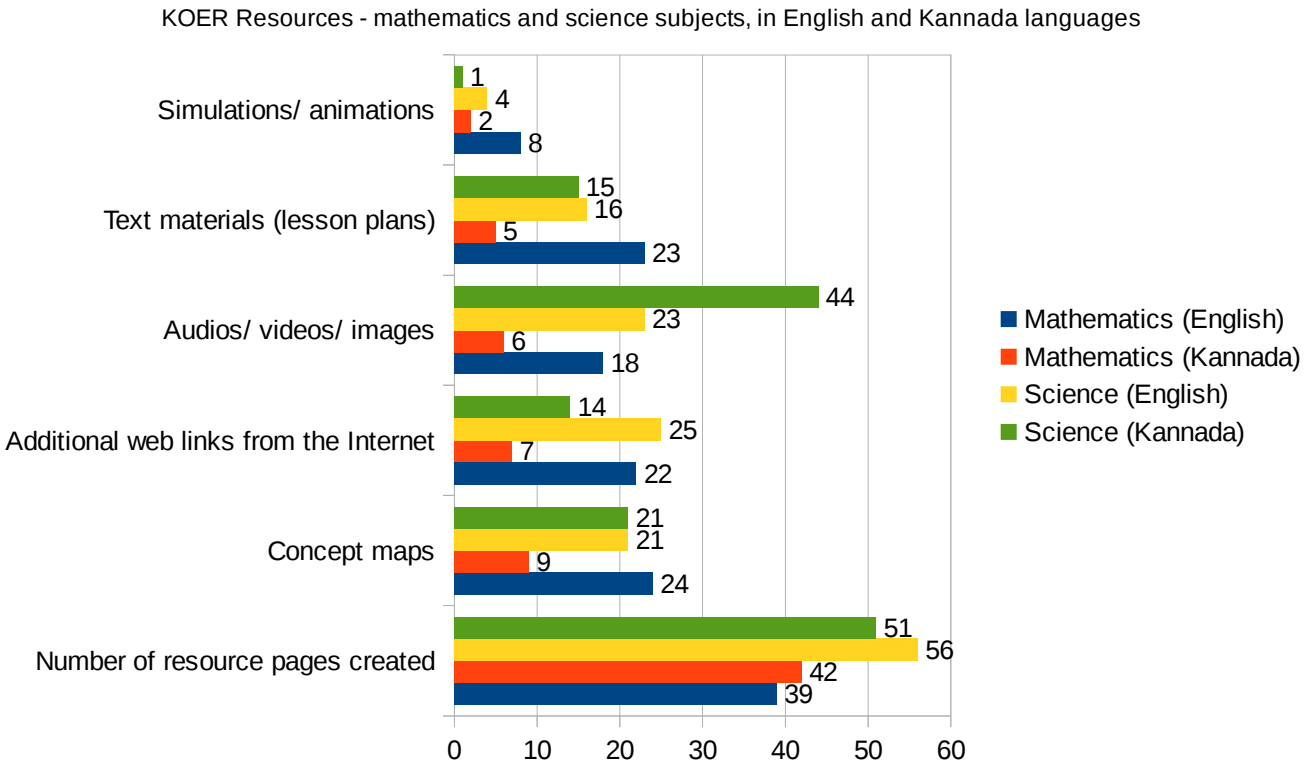


How did OER adoption impact techno-pedagogical factors



How did OER adoption impact techno-pedagogical factors

How did OER adoption impact techno-pedagogical factors

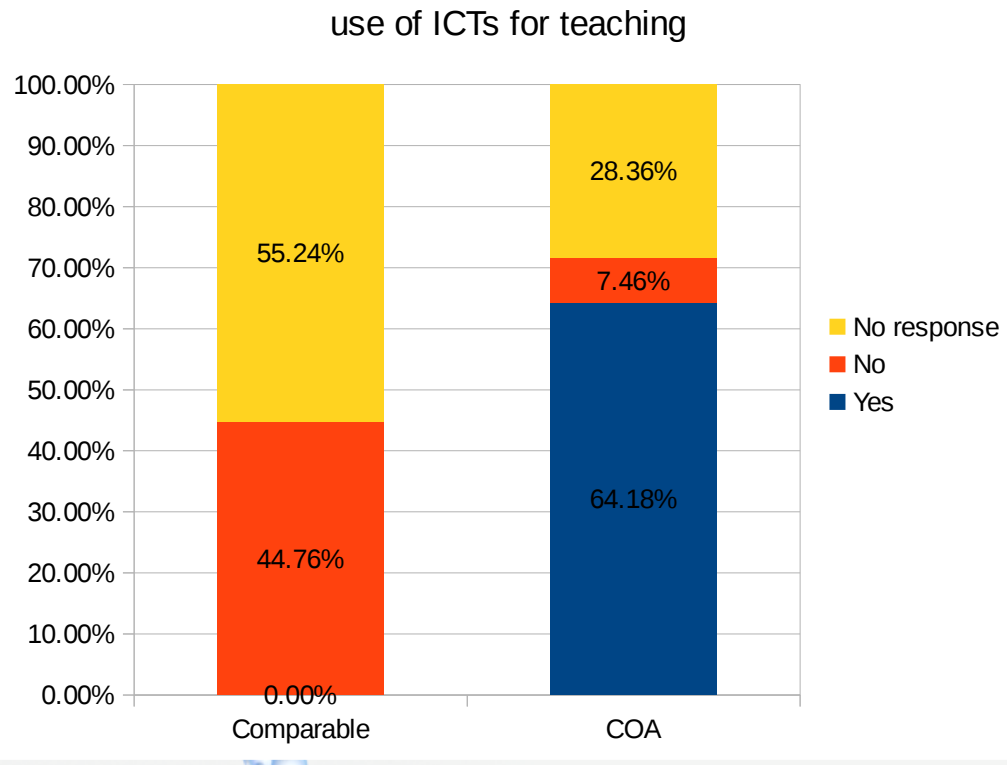
- Impact of COA processes on TPD
  - OER counter to the textbook culture (teachers made videos)
  - Use of technology for self learning and in teaching
  - Impact of COA processes on teacher networking

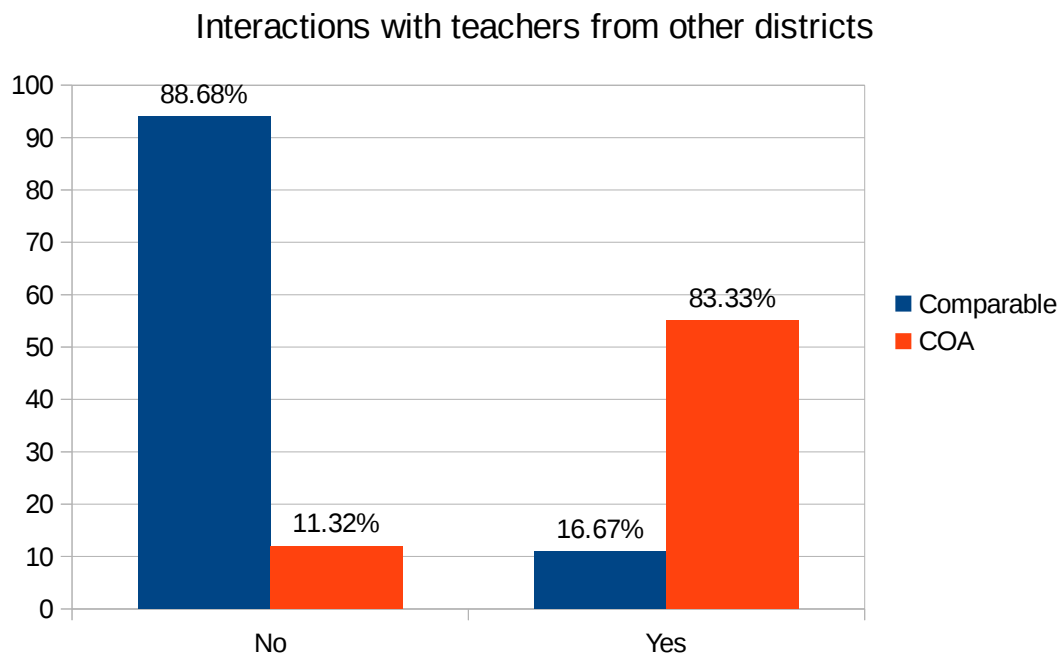
Science videos

Maths made interactive

How did OER adoption impact techno-pedagogical factors

- Use of technology for self learning and in teaching
- Impact of COA processes on teacher networking



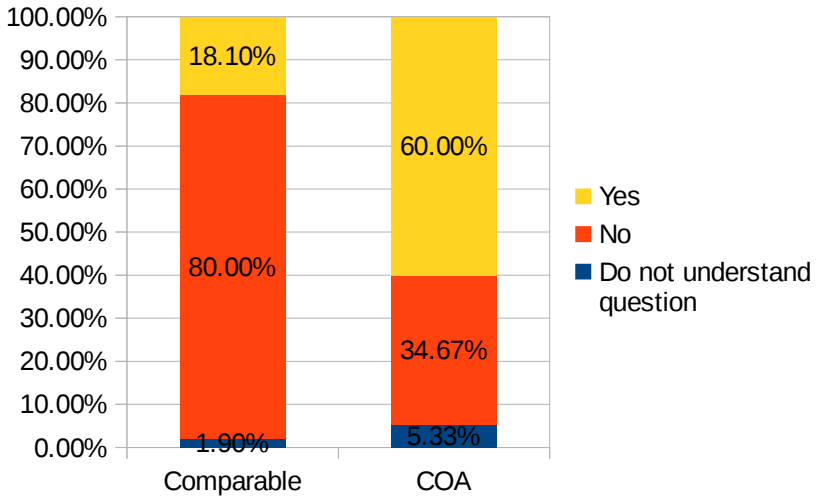


How did OER adoption impact techno-pedagogical factors

- Techno-pedagogical challenges
  - Sustainability of KOER portal publishing
  - Quality of OER

How did OER adoption impact socio-cultural factors

Understanding of open licensing - “Implicit” OER



Nature of resource based on copyright	Number	Percentage
Explicit non-OERs	3	1.84%
Implicit non-OERs	0	0.00%
Implicit OERs	144	88.34%
Explicit OERs	16	9.82%
Total	163	100.00%

Effectiveness of COA processes on OER adoption – socio cultural factors

- Contextually relevant resources
  - OER to respond to the teachers' and learners' contexts
  - OER creation in the local language

Conclusions

- Professional Learning Communities" - a systemic model for OER adoption and TPD in the public education system
  - Embedding OER adoption in the public education system
- Policy recommendations
  - Implement PLC approach to TPD in in-service teacher education
  - Implement the COA model for OER adoption
  - Copyright policy should make open licensing as the default
  - Implement a free and open technology environment

Next steps for research

- How does the community help the OER adoption process
- OER adoption in classrooms
- Abstracting principles and designing for upscaling to other states

Acknowledgments

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